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WHAT IS CLAIMED IS:

1. A semiconductor device comprising:

a first semiconductor chip;

5 a second semiconductor chip which is mounted on
the first semiconductor chip;

a first electrode group which is formed on the
first semiconductor chip and arranged along an outer
periphery of the first semiconductor chip in such a manner
as to surround the second semiconductor chip;

10 a second electrode group which is formed on the
first semiconductor chip and arranged along the outer
periphery of the first semiconductor chip in such a manner
as to surround the first electrode group;

15 a third electrode group which is formed on the
second semiconductor chip;

a plurality of first wires for electrically
connecting the first electrode group and the third
electrode group to each other; and

20 external connection terminals which are
electrically connected to the second electrode group,

wherein the first semiconductor chip comprises a
first circuit element region which is surrounded by the
first electrode group, and a second circuit element region
which surrounds the first electrode group and is surrounded
25 by the second electrode group.

2. A semiconductor device comprising:

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a first semiconductor chip having a first circuit element region, and a second circuit element region which is positioned between the first circuit element region and an outer periphery;

5 a plurality of first electrodes which are formed on the first semiconductor chip and arranged in a region between the first circuit element region and the second circuit element region;

10 a plurality of second electrodes which are formed on the first semiconductor chip and arranged in a region between the second circuit element region and the outer periphery;

15 a second semiconductor chip which is mounted in the first circuit element region of the first semiconductor chip;

a plurality of third electrodes which are formed on the second semiconductor chip;

20 a plurality of first wires for electrically connecting the first electrodes and the third electrodes to each other; and

external connection terminals which are electrically connected to the second electrodes.

25 3. The semiconductor device according to claim 1, wherein:

the external connection terminals are conductive leads;

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the plurality of leads are arranged along the outer periphery of the first semiconductor chip at positions separate from the first semiconductor chip by a predetermined distance; and

5 the second electrode group and the leads are electrically connected to each other by a plurality of second wires.

4. The semiconductor device according to claim 1,
10 wherein a size of the second semiconductor chip is smaller than that of the first semiconductor chip.

5. The semiconductor device according to claim 1,
 wherein the first semiconductor chip and the second
15 semiconductor chip are sealed with a resin.

6. The semiconductor device according to claim 1,
 wherein:

 the external connection terminals are conductive
20 leads;

 the plurality of leads are arranged along the outer periphery of the first semiconductor chip at positions separate from the first semiconductor chip by a predetermined distance;

25 the second electrode group and the leads are electrically connected to each other by a plurality of second wires;

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the first semiconductor chip and the second semiconductor chip are sealed with a resin; and

the first wires and the second wires are sealed with the resin.

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7. The semiconductor device according to claim 1, wherein the first semiconductor chip is formed on a support.

8. The semiconductor device according to claim 1, wherein the first electrode group and the second electrode group are formed along sides of the outer periphery of the first semiconductor device.

9. The semiconductor device according to claim 1, wherein the third electrode group is formed along an outer periphery of the second semiconductor chip.